

WR-35  
Rev (8-10)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: DECEMBER 6, 2011  
API #: 035-1459 REWORK

Farm name: VALENTINE Operator Well No.: MCCARTY #1

LOCATION: Elevation: 910' Quadrangle: LIVERPOOL 7.5

District: RAVENSWOOD County: JACKSON  
Latitude: 10300' Feet South of 38 Deg. 55 Min. 00 Sec.  
Longitude 13150' Feet West of 81 Deg. 30 Min. 00 Sec.

Company:

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
ROY G. HILDRETH AND SON, INC., PO BOX 1007 SPENCER, WV 25276				
Agent: <b>ROY G. HILDRETH</b>	7"	2198'	2198'	TOP CEMENT 1800'
Inspector: <b>JAMIE STEVENS</b>	4 1/2"	2290'	2290'	TOP CEMENT 1300'
Date Permit Issued: <u>9/7/10</u>				
Date Well Work Commenced:				
Date Well Work Completed: <u>11/30/11</u>				
Verbal Plugging:				
Date Permission granted on:				
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig				
Total Vertical Depth (ft):				
Total Measured Depth (ft): <u>2618'</u>				
Fresh Water Depth (ft.): <u>100'</u>				
Salt Water Depth (ft.): <u>2050'</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>N</u>				
Void(s) encountered (N/Y) Depth(s) <u>N</u>				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation BEREA Pay zone depth (ft) 2570 - 2580'

Gas: Initial open flow SHOW MCF/d Oil: Initial open flow SHOW Bbl/d

Final open flow 20 MCF/d Final open flow 5 Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Ray G. Hildreth  
Signature

Dec. 6th, 2011  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were X Electrical, \_\_\_\_\_ Mechanical, \_\_\_\_\_ or Geophysical logs recorded on this well?  
Y/N Y/N Y/N

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

**75 QUALITY FOAM FRAC W/ 32000# OF 20/40 SAND - OPEN HOLE FRAC**

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>/</u>	<u>Bottom Depth</u>
<u>Surface:</u>			

**SEE ORIGINAL DRILLING LOG**

**SEE ATTACHED EXHIBIT A**

Well No. 1	O. S. McLarty	Farm 235	Acres	
Lease No. 7995	Thompson	Jackson County W. Va.	State	
J. F. Vancamp	Contractor	J. F. Vancamp	Contractor	
Drilling Commenced Nov. 3 1925	Drilling Completed Jan. 2 1927			
N.	S. 38	E.	W. 51	
Rock Formation	Top	Bottom	First Line Measurement	Remarks
Slate & Shells	1500	1627		Water furnished
8" Basins Water at		1535		for 1
band	1627	1642		by J. F. V. Co.
slate	1642	1652		17' 2" W. V. Co.
lime	1652	1700		46 Days
band	1700	1720		
slate	1720	1735		
lime	1735	1795		had furnished
band	1795	1830		for drilling
lime shells	1830	1870		by Victor Pail
band	1870	2060		Thompson
Hard Green Slate		1905		46 Days
marble sand	2060	2078		
Big lime	2078	2115		
Big lime	2115	2180		
1/2" heavy 105 ft.		2180		
slate	2160	2162		
band	2162	2177		
lime	2177	2185		
slate	2185	2192		
shells	2192	2195		
slate	2192	2195		
lime	2195	2194		

CASING RECORD AS TALLIED. NOT STEEL LINE MEASUREMENT

[illegible]

Continued

### Packer Size

**Depth Set.**

Well No. 1 C. S. McCarroll  
Lease No. 77952 Ravenna  
Drilling Commenced Nov. 3 1928  
N. S. J. S.

Rock Formation

Top

Bottom

Steel Line Measurement

Remarks

Slate 2194 2205  
Slate & Shells 2205 2280  
" " 2280 2315  
Slate & Shells 2315 2560  
Brown Slate 2560 2570  
Berea 2570 2582  
Oil 2572 2580  
Total Depth 2584

3rd Shot - 7-11-29  
60 gts. - Bureau Sand  
Result - Good

2nd Shot 5-3-29  
30 gts.  
Result - Good

4th Shot 8-13-29  
100 gts. - Bureau  
Result - Good

**CASING RECORD AS TALLIED. NOT STEEL LINE MEASUREMENT**

Put in Well.		Pulled Out		Left in Well		Shot Date:
Size	Feet	In.	Feet	In.	Feet	In.
						Amount
10'	945	2				Sand
5' 1/2"	1215	5				Result
6' 5/8"	2417	0				
						Packer Size
						Broken
						Depth Set

47-035-1459

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 7/24/2012  
API #: 47-085-09918

Farm name: Heartwood Forestland Fund IV

Operator Well No.: 2-H

LOCATION: Elevation: 907' GL

Quadrangle: Macfarlan

District: Murphy

County: Ritchie

Latitude: 8,040 Feet South of 39 Deg. 7 Min. 30 Sec.

Longitude 11,500 Feet West of 81 Deg. 10 Min. 00 Sec.

Company: Viking Intl. Resources Company, Inc.

Address:	P.O. Box 100	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	Reno, Ohio 45773	20"	80'	76'	grouted to surface
Agent:	Lloyd Todd				(65sks.)
Inspector:	David Cowan	13 3/8"	422'	422'	383.5 cu. ft.
Date Permit Issued:	4/18/2011				(325 sks.)
Date Well Work Commenced:	5/26/2011	9 5/8"	3,458'	3,458'	1,357 cu. ft.
Date Well Work Completed:	9/28/2011				(1,150 sks.)
Verbal Plugging:	N/A	7"	4,998'	4,998'	501.5 cu. ft.
Date Permission granted on:	N/A				(425 sks.)
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>		4 1/2"	N/A	8,554'	656.5 cu. ft.
Total Vertical Depth (ft):	5,778'				(521 sks.)
Total Measured Depth (ft):	8,557'				
Fresh Water Depth (ft.):	Surface - 200'				
Salt Water Depth (ft.):	@ 1,000'				
Is coal being mined in area (N/Y)?	No				
Coal Depths (ft.):	N/A				
Void(s) encountered (N/Y) Depth(s)	N/A				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Shale Pay zone depth (ft) 5,770'

Gas: Initial open flow 1,100 MCF/d Oil: Initial open flow - 0 - Bbl/d

Final open flow 700 MCF/d Final open flow Trace Bbl/d

Time of open flow between initial and final tests (7 days) 168 Hours

Static rock Pressure 1,075 psig (surface pressure) after 2 Hours

Second producing formation Pay zone depth (ft)

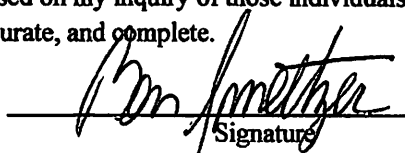
Gas: Initial open flow MCF/d Oil: Initial open flow Bbl/d

Final open flow MCF/d Final open flow Bbl/d

Time of open flow between initial and final tests Hours

Static rock Pressure psig (surface pressure) after Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

  
Signature

7/24/2012  
Date

Were core samples taken? Yes \_\_\_\_\_ No X

Were cuttings caught during drilling? Yes X No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list (Offset to pilot well P #: 47-085-09833)  
Only electric logs run were a Radial Bond Log, Gamma Ray, and Casing Collar Locator.

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.

Perforated Intervals, Fracturing, or Stimulating:				Marcellus Shale completed in eight stages. (Slick-Water w/Sand)			
Stage #	Perforations (75 holes/stage)	Total Fluid	Total Sand	Stage #	Perforations (75 holes/stage)	Total Fluid	Total Sand
1	8238' - 8482'	11,512 bbls.	369,545 lbs.	6	6690' - 6890'	8,800 bbls.	381,069 lbs.
2	7936' - 8160'	11,222 bbls.	387,205 lbs.	7	6386' - 6567'	8,650 bbls.	366,234 lbs.
3	7608' - 7857'	10,389 bbls.	299,553 lbs.	8	6027' - 6246'	10,565 bbls.	418,682 lbs.
4	7288' - 7534'	9,763 bbls.	395,085 lbs.				
5	6940' - 7191'	9,100 bbls.	399,092 lbs.				
Plug Back Details Including Plug Type and Depth(s):				JOB TOTAL: Total Stages = Eight (8)			
				Total Fluid = 80,001 bbls.			
All composite frac plugs drilled out using coil tubing unit.				Total Sand = 3,016,465 lbs.			

Formations Encountered: \_\_\_\_\_ Top Depth \_\_\_\_\_ / \_\_\_\_\_ Bottom Depth \_\_\_\_\_  
Surface: \_\_\_\_\_

As reported above, the HF # 2-H Well is a 50' offset well to the HF # 1 well, All formations depths down to 5,200' are essentially the same.

			(Pilot Well Formation Depths)	
HF # 2-H	VD	MD		
Top of curve	= 5,200'	5,200'	Second Salt Sand	1280' - 1438'
Top of Marcellus	= 5,730.5'	5,802'	Maxton Stray	1596' - 1644'
Bottom of Curve	= 5,771.6'	5,960'	Maxton Sandstone	1696' - 1762'
TOTAL DEPTH	= 5,766'	8,557'	Greenbrier Limestone	1762' - 1894'
			Big Injun Sandstone	1900' - 1965'
			Berea Sandstone	2322' - 2326'
			Gantz	2430' - 2444'
			Gordon (5th Sand)	2712' - 2722'
			Upper Olentangy Shale	4363' - 5352'
			Lower Olentangy Shale	5352' - 5727'
			Marcellus Shale	5727' - 5800'
			Orandaga Limestone	5800' - 5936'